Deep Water Mussel Farming
In Newfoundland and Labrador

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President – Norlantic Processors Limited.
Presentation Overview

- Site Selection
- Long Line Design
- Environmental Issues
- Application Process
Site Selection
Site Selection

**Challenges**
- Finding suitable areas
- Water classification
- Economies of scale
- NIMBY

**Solutions**
- Costal zone management
- Identify and Approve water for grow out
- Mechanization
- Education to change public attitude
Flow Through Sites

**Advantages**
- Provides the best water exchange
- Higher chlorophyll levels
- Increases productivity

**Disadvantages**
- May produce heavy bissell threads
- Heavy fouling
- Secondary mussel set
- Higher risk of damage from arctic ice
Inlets

Advantages

- Winter freeze up
- Protection from arctic ice

Disadvantages

- Less water exchange
- Lower chlorophyll levels
- Reduced production from site
Flow Through Site Vs. Inlet Site
Long Line Design
Long Lines

**Advantages**
- Isolates product from surface conditions
- Stabilizes chlorophyll levels
- Reduces bio-fouling

**Disadvantages**
- Requires specialized harvest and deployment equipment
- High material cost
- Requires specialized flotation
Long Line Site Arrangement

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**Bulley's Cove - Upper Side Of Channel**
*2008 Socks*

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**Bulley's Cove - Lower Side Of Channel**
*2007 Socks*

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**Bulley's Cove - Lower Side Of Channel**
*2008 Socks*

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**Bulley's Cove - Lower Side Of Channel**
*2008 Socks*
## Long Line Identification

### Bulley's Cove - Lower Side Of Channel

#### 2008 Socks

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<tr>
<th>Line</th>
<th>Description</th>
<th>Sizes</th>
<th>Dates</th>
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<tr>
<td>BC-1RS-08</td>
<td>Line BC-1RS-08 (Total 873 7XL Large)</td>
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<td>~503 7XL 15' 15-Oct-08</td>
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<td>~60 7XL 15' 16-Oct-08</td>
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<td>~280 7XL 15' 17-Oct-08</td>
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<td>BC-2RS-08</td>
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<td>~167 6XL 15' 20-Oct-08</td>
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<td>~92 8XL 15' 30-Oct-08</td>
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<td>~280 8XL 15' 4-Nov-08</td>
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</table>
Spat Collection In Grow Out Sites?

- Disadvantages
  - Often problematic due to secondary set on mussel socks

- Solutions
  - Avoid grow out and collection in the same area
  - Deploy grow out gear below spat collection level
Environmental Issues
Environmental Issues
Environmental Issues
Environmental Monitoring

“A Quality Industry Requires Quality Programming.”

In light of the issues of invasive species, the changing environment and global warming, there has to be an increase in monitoring of the water and environmental factors that affect our industry.
The Application Process

The Art Of Understanding Frustration
The Application Process

- Application Process
  - Referrals must be submitted to all Provincial and Federal departments
  - Public advertising

- Advertising Process
  - Public consultations
  - Resolution of opposition
  - 18 to 24 months for approval
The Aquaculture Act

- Challenges
  - Too restricting
  - Must be investor friendly
  - Licensing conditions are non-negotiable

- Solutions
  - More consultations are needed with industry before changes are made to the Aquaculture Act
  - Steps must be taken to increase investor confidence
Crown Lands Title

Challenges

- Obtain title (NIMBY)
- Real property rights
- Existing titles have no “teeth”

Solutions

- Costal Zone Management Plan
- Public education
- Overriding titles by license conditions
Canadian Coast Guard
NWPA Act

- Challenges
  - Over a century old
  - Not standardized

- Solutions
  - New legislation
  - Consultation with industry
  - National set of standards must be developed
Approved Site Surveys
Thank You